News Items from the School of Education of the University of Chicago

DETAILED STUDIES OF ELEMENTARY-SCHOOL SUBJECTS

There has been an insistent demand during recent years for intensive studies of elementary-school subjects, the results of which can be used in improving instruction. It is significant that candidates for higher degrees are making such problems the basis of their investigations. Two such studies which were recently completed in the Graduate Department of the School of Education are reported briefly in the paragraphs which follow.

The first investigation, entitled "An Experimental Study of the Reading of Isolated Numerals and of Numerals in Arithmetic Problems," was carried on by Paul W. Terry, Ph.D. The purpose of this investigation was to describe the methods used by adults in reading isolated numerals and numerals in arithmetical problems. In the first part of the work introspective observations on the part of the subjects provided the data, and in the second part the data were procured by photographing the movements of the eyes of the subjects as they read problems.

Two phases of the reading of a problem are distinguished, namely, the first reading and the re-reading. During the first reading the conditions of the problem are learned and the numerals, which are always noticed in some fashion, are read either partially or wholly. Whole first reading implies complete and accurate perception of a numeral, and any reading less than this is called a partial first reading. This latter method of first reading is more economical of time and it was used by the faster readers.

During the re-reading the numerals only were found to be the objects of attention. Re-reading is closely connected with copying the numerals on the computation paper. Certain individuals did not re-read the numerals but computed directly from the problem as it appeared. Large possibilities of economy in respect to time and mental energy are found in this method of procedure.

The isolated numerals were found to be read by grouping the digits in certain ways depending mainly on the lengths of the numerals. The effect of punctuation as facilitating the use of larger groups of digits is described. As the numerals increased in length more time and more phases of the eye were required to read them. The subjects revealed two methods of attack in reading the numerals. In the one case a small number of long pauses were involved, and in the other case a large number of short pauses.

A large number of plates give detailed pictures of the readings of individuals, both in the case of the isolated numerals and in the case of the problems. Every section of the report contains information and suggestions of genuine value to teachers of arithmetic. Dr. Terry's report will be published as one of the Supplementary Educational Monographs.

The second investigation, entitled "The Content of School Courses in English Grammar," was made by Martin James Stormzand, Ph.D. The purpose of the investigation was to determine what the content of school courses in English grammar should be when based on the relative frequencies of the various grammatical usages.

In order to secure information 10,000 sentences were analyzed, approximating 200,000 running words. These sentences were selected from material ranging from the best type of standard prose to the most ephemeral matter of the daily newspaper and popular fiction. Written material was also included which had been written by students in the sixth grade or above.

The results include a complete evaluation of all available topics in courses in English grammar on the basis of their relative frequency in daily use. Such a body of facts is of very large importance in determining the amount of emphasis which should be given in instruction to various topics. Dr. Stormzand points out clearly that a valid grammar curriculum can be organized only when both the frequency of usage and the frequency of errors are considered. Significant criticisms of current courses in grammar are pointed out. The investigation has paved the way for the intensive study of a number of problems relating to the psychology of language acquisition.